

What is claimed is:

1. (Withdrawn) A method for inhibiting apoptosis in dendritic cells comprising the administration to the dendritic cells an agent which prevents or inhibits the expression of the MINORmitogen induced nuclear orphan receptor (MINOR) gene in said dendritic cells.
2. (Withdrawn) A method of claim 1 wherein said agent is administered to the dendritic cells ex vivo.
3. (Withdrawn) A method of claim 1 wherein said agent is administered to the dendritic cells in vivo.
4. (Withdrawn) A method of claim 1 wherein said agent is a small interfering RNA.
5. (Withdrawn) A method of claim 1 wherein said agent is an anti-sense nucleotide molecule.
6. (Withdrawn) A method of claim 4 wherein the small interfering RNA is comprised of the double stranded nucleotide sequence of 5'
GATCCCCTGCCCTTGTCCGAGC^TrTATTCAAGAGATAAAGCTCGGACAAGGGCATT
TGGAAA-3' (SEQ ID NO: 2); forward and
5'AGCTTTCCAAAAATGCCCTTGTCCGAGCTTATCTCTGAATAAAGCTCGGACAAG
GGCAGGG-3'(SEQ ID NO: 3); reverse.
7. (Withdrawn) A method of claim 1 wherein said agent inhibits signal transduction leading to the expression of MINOR.

8. (Withdrawn) A method of claim 1 wherein said agent inhibits the intracellular activity of MINOR.

9. (Withdrawn) The method of claim 1, wherein the expression of MINOR in the dendritic cells is decreased by transduction of the cells with a lentiviral vector encoding an siRNA construct having substantial sequence homology to MINOR.

10. (Withdrawn) A method for decreasing the expression of a protein in a cell population, said method comprising the steps of generating a lentiviral vector encoding an siRNA construct having substantial sequence homology to said protein, and transducing the cell population with said lentiviral vector.

11. (Withdrawn) The method of claim 10, wherein the protein is MINOR.

12. (Withdrawn) The method of claim 1, wherein the dendritic cells are bone marrow dendritic cells.

13. (Withdrawn) A method for increasing the survival time of ex vivo-generated dendritic cells following infusion of said cells into a subject, the method comprising the ex vivo transduction of said cells with a lentiviral vector encoding an siRNA construct having substantial sequence homology to MINOR and infusing the transduced cells into the subject.

14. (Withdrawn) The method of claim 13, wherein the subject is human.

15. (Withdrawn) The method of claim 13, wherein the dendritic cells are bone marrow dendritic cells.

16. (Withdrawn) A method for enhancing the antigen presenting ability of dendritic cells, said method comprising transducing said cells with a lentiviral vector encoding an siRNA construct having substantial sequence homology to MINOR.

17. (Withdrawn) The method of claim 16, wherein the dendritic cells are bone marrow dendritic cells.

18. (Withdrawn) A method for enhancing the capacity for dendritic cells to stimulate tolerant T cells, said method comprising transducing said cells with a lentiviral vector encoding an siRNA construct having substantial sequence homology to MINOR.

19. (Withdrawn) The method of claim 18, wherein the dendritic cells are bone marrow dendritic cells.

20. (Currently Amended) A dendritic cell-based vaccine comprising dendritic cells expressing siRNA's having substantial sequence homology to MINOR mitogen induced nuclear orphan receptor (MINOR).

21. (Original) The vaccine of claim 20, wherein said vaccine is for cancer, viral disease, bacterial disease, or immune disorders.

22. (Original) The vaccine of claim 21, wherein said vaccine is for cancer.

23. (Withdrawn) A method for preparing the vaccine of claim 20, comprising the step of preparing an siRNA construct having substantial sequence homology to MINOR and ex vivo transducing dendritic cells with said construct.

24. (Withdrawn) A method of preserving the CD11c+ population of dendritic cells, comprising transducing hematopoietic stem-progenitor cells with a lentiviral vector encoding an siRNA construct having substantial sequence homology to MINOR.

25. (Withdrawn) A method for stably decreasing or substantially suppressing the expression of MINOR in dendritic cells, said method comprising the steps of transducing hematopoietic stem-progenitor cells with a lentiviral vector encoding an siRNA construct having substantial sequence homology to MINOR and transplanting the transduced cells into a myeloablatively treated mammalian subject.

26. (Withdrawn) The method of claim 20, wherein the mammalian subject is human.

27. (Withdrawn) A method of augmenting an immune response specific for an antigen in an individual, comprising the steps of: (a) obtaining dendritic cells from the individual; (b) causing the dendritic cells to express the antigen by either (i) exposing the dendritic cells to the antigen in culture under conditions promoting uptake and processing of the antigen, or (ii) transfecting the dendritic cells with a gene encoding the antigen; (c) activating the antigen-expressing dendritic cells, (d) treating the dendritic cells with an agent that inhibits MINOR expression; and. (e) administering the activated, antigen-expressing dendritic cells to the individual.

28. (Withdrawn) The method of claim 27, wherein the dendritic cells are obtained by obtaining hematopoietic stem or progenitor cells from the individual, and contacting the hematopoietic stem or progenitor cells with an agent selected from the group consisting of flt-3 ligand, GM-CSF, IL-4, TNF-.alpha., IL-3, c-kit ligand, fusions of GM-CSF and IL-3, and combinations thereof.

29. (Withdrawn) The method of claim 27 wherein the agent inhibiting MINOR expression is a small interfering RNA.

30. (Withdrawn) The method of claim 27 wherein the agent inhibits signal transduction in dendritic cells resulting in the expression of MINOR.

31. (Withdrawn) The method of claim 27 wherein the agent inhibits the intracellular activity of MINOR.

32. (Previously Presented) A small interfering RNA comprising the double stranded nucleotide sequence of

5'GATCCCCTGCCCTTGTCCGAGCTTATTCAAGAGATAAAGCTCGGACAAGGGC

ATTTTGAA-3'; forward (SEQ ID NO: 2) and

5'AGCTTTCCAAAATGCCCTTGTCCGAGCTTATCTCTGAATAAGCTCGGACAAG
GGCAGGG-3'; reverse (SEQ ID NO: 3).

33. (Original) A dendritic cell expressing the small interfering RNA of claim 32.

34. (Currently Amended) A population of dendritic cells for use in vaccination of a subject produced by the process of (a) obtaining dendritic cells from thean individual; (b) causing the dendritic cells to express thean antigen by either (i) exposing the dendritic cells to the antigen in culture under conditions promoting uptake and processing of the antigen, or (ii) transfecting the dendritic cells with a gene encoding the antigen; (c) activating the antigen-expressing dendritic cells, (d) treating the dentritic cells with an agent that inhibits MINORmitogen induced nuclear orphan receptor (MINOR) expression, wherein the agent that inhibits MINOR expression is selected from peptides, peptidomimetics, small molecules or inhibitory nucleotides.

35. (Original) A population of dendritic cells of claim 34 wherein the agent that inhibits MINOR expression is a nucleotide construct containing a small interfering RNA.

36. (Previously Presented) A population of dendritic cells of claim 35 wherein the small interfering RNA is comprised the double stranded nucleotide sequence of
5'GATCCCTGCCCTGTCCGAGCTTATTCAAGAGATAAAGCTCGGACAAGGGC
ATTTTGAA-3'; forward (SEQ ID NO: 2) and
5'AGCTTTCCAAAATGCCCTGTCCGAGCTTATCTCTGAATAAGCTCGGACAAG
GGCAGGG-3'; reverse (SEQ ID NO: 3).